

**REMARKS**

Pending in this application are claims 1-4, 6, 8, and 10-17. Claims 5, 7 and 9 are cancelled.

**Priority****Regarding 09/435,657**

The instant application is a divisional of patent application 09/435,657 which claimed the benefit of patent application 08/607,964 (now patent 5,983,068). Paragraph [001] was amended to clarify this point in an amendment sent on 08/22/2005 that included the necessary supporting documentation.

More specifically, the first paragraph of the 09/435,657 application states, "This is a continuation-in-part of U.S. Nonprovisional Application serial no. 08/607,964, entitled Photonic Home Area Network, filed February 29, 1996 to John Tomich, et al., which is incorporated by reference for all purposes."

Examiner stated that the instant application adds and claims additional disclosure not presented in the prior applications from which the instant application claims priority (09/435,657 and 08/607,964). For example, Examiner believes claim 7 and paragraph [067] both disclose subject matter that was not presented in the prior applications. Applicant, however, believes that such matter was in fact disclosed in patent application 08/607,964 (now patent 5,983,068) for example, in the final five paragraphs. As such, Applicant respectfully request reconsideration of Examiner's stance regarding the contents of and the relationship between the instant application and the 09/435,657 and 08/607,964 applications.

Applicant still believes originally filed claim 7 is fully supported but, purely in the interest of proceeding with the current prosecution in a timely manner, Applicant cancelled claim 7 in an amendment submitted on 08/22/2005.

**Regarding 08/607,964**

The instant application is a divisional of patent application 09/435,657 which is a continuation-in-part of U.S. Nonprovisional Application serial no. 08/607,964. The

subject matter that the Examiner thought to not be present (for example, claim 7 and paragraph [067]) was incorporated by reference in the 09/435,657 patent application.

Examiner stated that Office records do not show a chain of continuity between 09/435,657 and 08/607,964 and suggested that Applicant contact the Office of Initial Patent Examination (OIPE). Per a phone conversation with the Examiner on 05/30/2006, Examiner verified that a chain of continuity between 09/435,657 and 08/607,964 exists and that such a chain of continuity is described in PAIR.

### Drawings

The drawings were objected to under 37 CFR 1.83(a) because the Examiner stated that the limitations in claim 7 were not shown. Since claim 7 was previously cancelled, Applicant respectfully requests the objection to the drawings be lifted.

Figure 10, which Applicant believes is fully supported, was previously cancelled purely in the interest of proceeding with the current prosecution in a timely manner.

### Claims

#### Objections

Claim 3 was objected to because of an informality that has been corrected by changing the dependency of claim 3 to depend on claim 2. Applicant thanks the Examiner for such a suggestion.

#### 35 USC § 112

Claim 9 was rejected under 35 USC § 112, first paragraph. Claim 9 has been cancelled. As such, Applicant respectfully requests the 35 USC § 112 rejection be lifted.

#### 35 USC § 102

#### *Amitay:*

Claims 1, 5-6, and 8-9 were rejected under 35 USC § 102(b) as being anticipated by Amitay (4,807,222).

The Examiner rejected claim 1 because Examiner believes Amitay disclosed a Regional Bus Interface Unit (RBIU) that the Examiner equated with the third circuit of claim 1 in the instant application.

Claim 1 has been amended to further clarify a wide-signal bandwidth multi-access channel comprising a plurality of units each of which is operably coupled to a head-end communications circuit (and not a "third circuit") and a subsequent set of the units, wherein such coupling provides a ring network configuration.

The head-end communications circuit 20 of the instant invention is described as having a number of characteristics that are not disclosed by Amitay's RBIU. For example, the instant application discloses:

[0029] An intelligent head-end station 20 can "accumulate" outbound data from the homes delivered through signal path 58. The head-end station 20 delivers the accumulated outbound data in a cost effective manner in wide-bandwidth asynchronous transmissions, including, asynchronous transmissions mode ("ATM"), Internet Protocol (IP), and synchronous transmission mode formats. Use of these formats create a flexible interconnect of the HAN with the data network 12 by allowing variable transmission bandwidth rate structures. The HAN system is composed of a plurality of node stations 18 and the head-end communications circuit 20 arranged in a ring network.

[0030] The intelligent head-end station 20 can accommodate incoming data from the various data networks 12. The incoming data is time multiplexed data on the digital transmission carrier and modulated onto the optical signal path 58.

[0037] The television data segments, consisting of over about 100 to about 200 television channels, are transmitted to the home and then re-transmitted to the next home and so on until the TV signal format returns to the head-end equipment 20 where it is disregarded. To optimize bandwidth on the multi-access channel, 200 or 58, switched television channel equipment could be located at the Head-End 20 so as to provide specific television signals on customer demand.

[0039] Encoding algorithms are generated in the head-end equipment microcontroller 126 and are passed to each subscriber set-top box having authorized access to the premium channel. This encoding is automated with an update rate which is programmable by the user organization at the head-end station 20.

[0052] The head-end communications circuit 20 has an interface connectable to external communications data sources 12. For example, data is provided by a DBS television dish 102, a S & C Band satellite dish 104, a Ka Band LED Direct Space Communications link antenna 106 which feeds through a terminal box 107, a telephone cable 108 and a cable television cable 110. These sources are routed to the head-end communications circuit 20. The head-end circuit 20 converts these data sources into a high-speed digital data signal. This signal is conveyed through a transmit cable 26 and broadcast from a roof-top unit 22.

[0053] Referring to FIG. 7, shown is the head-end circuit 20 with a signal formatting circuit 120 for formatting the communications data sources into a multiplexed data signal 58. The signal formatting switch 120 takes the digitized television channels from numerous raw sources of single-way television such as DBS television 102 and S&C band satellite television 104 and selects a cross-section of channels and synchronizes their carriers for combination. The channels selected are a result of negotiations with communications service providers and the users of the photonic HAN 10. The synchronization switch 120 includes A/D devices internally where necessary to digitize an analog television channel.

Since a number of these characteristics are not disclosed by Amitay's RBIU, Applicant believes currently amended claim 1 is in condition for allowance and respectfully requests it as well as the claims that depend from it be passed to allowance.

*Shioda:*

Claims 1-3 and 5-8 were rejected under 35 USC § 102(e) as being anticipated by Shioda (5,537,393).

The Examiner rejected claim 1 because Examiner believes Shioda disclosed nodes that the Examiner equated with the third circuit of claim 1 in the instant application.

Claim 1 has been amended to further clarify a wide-signal bandwidth multi-access channel comprising a plurality of units each of which is operably coupled to a head-end communications circuit (and not a "third circuit") and a subsequent set of the units, wherein such coupling provides a ring network configuration.

The head-end communications circuit 20 is described as having a number of characteristics that are not disclosed by Shioda's nodes. For example, the instant application discloses:

[0029] An intelligent head-end station 20 can "accumulate" outbound data from the homes delivered through signal path 58. The head-end station 20 delivers the accumulated outbound data in a cost effective manner in wide-bandwidth asynchronous transmissions, including, asynchronous transmissions mode ("ATM"), Internet Protocol (IP), and synchronous transmission mode formats. Use of these formats create a flexible interconnect of the HAN with the data network 12 by allowing variable transmission bandwidth rate structures. The HAN system is composed of a plurality of node stations 18 and the head-end communications circuit 20 arranged in a ring network.

[0030] The intelligent head-end station 20 can accommodate incoming data from the various data networks 12. The incoming data is time multiplexed data on the digital transmission carrier and modulated onto the optical signal path 58.

[0037] The television data segments, consisting of over about 100 to about 200 television channels, are transmitted to the home and then re-transmitted to the next home and so on until the TV signal format returns to the head-end equipment 20 where it is disregarded. To optimize bandwidth on the multi-access channel, 200 or 58, switched television channel equipment could be located at the Head-End 20 so as to provide specific television signals on customer demand.

[0039] Encoding algorithms are generated in the head-end equipment microcontroller 126 and are passed to each subscriber set-top box having authorized access to the premium

channel. This encoding is automated with an update rate which is programmable by the user organization at the head-end station 20.

[0052] The head-end communications circuit 20 has an interface connectable to external communications data sources 12. For example, data is provided by a DBS television dish 102, a S & C Band satellite dish 104, a Ka Band LED Direct Space Communications link antenna 106 which feeds through a terminal box 107, a telephone cable 108 and a cable television cable 110. These sources are routed to the head-end communications circuit 20. The head-end circuit 20 converts these data sources into a high-speed digital data signal. This signal is conveyed through a transmit cable 26 and broadcast from a roof-top unit 22.

[0053] Referring to FIG. 7, shown is the head-end circuit 20 with a signal formatting circuit 120 for formatting the communications data sources into a multiplexed data signal 58. The signal formatting switch 120 takes the digitized television channels from numerous raw sources of single-way television such as DBS television 102 and S&C band satellite television 104 and selects a cross-section of channels and synchronizes their carriers for combination. The channels selected are a result of negotiations with communications service providers and the users of the photonic HAN 10. The synchronization switch 120 includes A/D devices internally where necessary to digitize an analog television channel.

Since a number of these characteristics are not disclosed by Shioda's nodes, Applicant believes currently amended claim 1 is in condition for allowance and respectfully requests it as well as the claims that depend from it be passed to allowance.

### 35 USC § 103

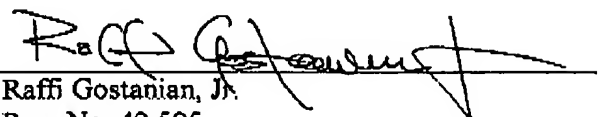
Claims 4 and 10-17 were rejected under 35 USC § 103(a) as being unpatentable over Amitay and over Shioda. Since these claims depend on amended claim 1 which Applicant believes is in condition for allowance, Applicant respectfully requests these claims be passed to allowance.

Double Patenting

A terminal disclaimer has been filed to overcome the double patenting rejection.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully Submitted,

  
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